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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

MATZ, William R.

Group Art Unit: 3629

Application No. 10/017,640

Examiner: Ouellette

Filed: December 14, 2001

Attorney Docket: BS01342

Title: "System and Method for Identifying Desirable Subscribers"

37 C.F.R. § 1.8 CERTIFICATE OF TRANSMISSION

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37 C.F.R. § 1.323 REQUEST FOR CERTIFICATE OF CORRECTION IN U.S. PATENT 7,212,979

Mail Stop: Certificate of Corrections Branch

Commissioner:

A typographical mistake has been found in issued patent 7,212,979. Please issue a Certificate of Correction to correct the following typographical mistakes in column 6 of the patent. The 37 C.F.R. § 1.20 (a) fee of $100 accompanies this request.

06/27/2007 TL0111   00000071 10017640
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The subscriber-action database may include a clickstream database. A clickstream database is common in Internet monitoring applications. Each time a web-browser user clicks on a link in a web page, a record of the click is stored in a conventional clickstream database. A database that includes similar information for television viewers is disclosed in a patent application filed on February 1, 2000 May 25, 2000 by Edward R. Grauch, et al., Serial No. 09/496,825 09/496,92, entitled "Method and System for Tracking Network Use", which is hereby incorporated by reference. In the database described, each action taken by a television subscriber 123, such as "channel up" and "channel down" are stored in a database with a date-time stamp to allow tracking of the television viewer's actions.

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If any issues remain outstanding, the Office is requested to contact the undersigned at (919) 469-2629 or _scott@scottzimmerman.com_.

Respectfully submitted,

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FIG. 2 is a flowchart illustrating a process implemented to merge various data sources in an embodiment of the present invention.

FIG. 3A is a table illustrating various sources of programming and advertising content available to a subscriber during a period of time in an embodiment of the present invention.

FIG. 3B illustrates content displayed on a subscriber's television during a period of time in an embodiment of the present invention.

FIG. 4 is a flowchart illustrating the process of merging the data shown in FIG. 3A to create the merged data shown in FIG. 3B in an embodiment of the present invention.

FIG. 5 is a table illustrating the programming viewed by the subscriber during the period shown in FIGS. 3A, 3B, and 4 in an embodiment of the present invention.

FIG. 6 is a flowchart illustrating the process for identifying a desirable subscriber in an embodiment of the present invention.

FIG. 7A is a table illustrating a subscriber information database in an embodiment of the present invention.

FIGS. 7B and 7C are tables illustrating probability calculations performed on the data in the table in FIG. 7A in an embodiment of the present invention.

DETAILED DESCRIPTION

Embodiments of the present invention provide systems and methods for utilizing information relating to a subscriber to identify the subscriber as desirable. In an embodiment of the present invention, a content-access information database includes viewing information for a subscriber. A subscriber attribute database includes additional data about the subscriber. A merge processor combines this information, using a key, such as the subscriber's social security number, to create a subscriber information database. A data analyzer, such as a data-mining application, provides tools for searching the subscriber database or to identify desirable subscribers. The data analyzer in an embodiment of the current invention provides a tool that allows a content provider to correlate content-access information, such as television viewing habits, and other subscriber information to identify desirable subscribers.

FIG. 1 is a block diagram illustrating an exemplary environment for an embodiment of the present invention. In the embodiment shown, a cable operator's head-end facility 102 includes a merge processor 104, which is in communication with a plurality of databases. These databases include a local-content database 106, a subscriber-action database 112, and a national-content database 114. The merge processor 104 is programmed to receive and merge data from the three databases 112, 114, and 106.

The local-content database 106 includes information from the advertising 108 and programming 110 databases. The advertising database 108 includes information related to local advertising produced and/or provided by the cable operator or other local source. Likewise, the programming database 110 includes information related to locally produced and/or provided programming. The advertising database 108 includes attributes of advertisements, such as the advertiser, producer, brand, product type, length of the content, and other descriptive information. The programming database 110 includes similar information related to programming, including the producer, type of programming, length, rating, and other descriptive information. The local-content 106, programming 108, and advertising 110 databases include a date-time identifier, which indicates when a

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program or advertisement has been provided. The date-time indicator provides a key value for merging various databases with one another.

In the embodiment of the present invention shown in FIG. 1, the cable operator head-end 102 also includes a national-content database 114. The national-content database 114 includes information from an advertising database 116 and a programming database 118. The information contained in each of these respective databases is similar to that contained in the local advertising 108 and programming 110 databases. However, the content is produced for a national audience and subsequently provided to the cable operator. The national-content 114, programming 118, and advertising 116 databases also include a date-time identifier.

The cable operator head-end 102 also includes a subscriber-action database 112. The subscriber-action database 112 includes the actions taken by subscribers while viewing television sets. For example, in the embodiment shown in FIG. 1, subscriber-action database 112 is in communication with cable network 120. A processor (not shown) in cable network 120 receives any subscriber actions transmitted via cable network 120 and inserts the actions as records in subscriber-action database 112. Also in communication with cable network 120 is a set-top box 124, which is installed in a subscriber's home 122. Also located in subscriber's home 122 is a television (TV) 126. As a subscriber 123 makes viewing choices on TV 126 via set-top box 124, these choices or actions are transmitted via a processor (not shown) in cable network 120 to the subscriber-action database 112.

The subscriber-action database may include a clickstream database. A clickstream database is common in Internet monitoring applications. Each time a web-browser user clicks on a link in a web page, a record of that click is stored in a conventional clickstream database. A database that includes similar information for television viewers is disclosed in a patent application filed on May 25, 2000 by Edward R. Grauch, et al., Ser. No. 09/496,92, entitled "Method and System for Tracking Network Use," which is hereby incorporated by reference. In the database described, each action taken by a television subscriber 123, such as "channel up" and "channel down" are stored in a database with a date-time stamp to allow tracking of the television subscriber's actions.

In the embodiment shown in FIG. 1, a merge processor 104 receives information from the local-content 106, national-content 114, and subscriber-action 112 databases and merges the data based on date-time attributes of the data. For example, a detail record in the subscriber-action database 112 indicates that a subscriber's set-top box 124 was tuned to channel 12, a National Broadcasting Company (NBC) affiliate. A record in the national-content database 114 indicates that at the same point in time, NBC was broadcasting a Professional Golf Association (PGA) tournament. A record in the local-content database 106 further indicates that the cable provider preempted the PGA tournament to broadcast an infomercial for a real estate investment strategy video. The merge processor 104 receives information from each of these sources and determines that at the point in time of interest, the subscriber 123 was watching the infomercial. The merge processor stores the resultant data in the subscriber content-choice database 128. In one embodiment of the present invention, the merge processor collects information from the various databases rather than receiving it. For example, a program on the merge processor 104 includes instructions for connecting to the various databases and extracting data from each one.